

unpatentable over U.S. Patent No. 5,030,253 to Tokuhiro et al ("Tokuhiro") in view of U.S. Patent No. 4,238,461 to de Vries ("Devries").

In this response, Applicant respectfully traverses the Examiner's rejection of claims 1-18 under 35 U.S.C. § 103(a) and requests reconsideration of the pending claims in view of the foregoing amendments and the following remarks.

## **II. February 10, 2004 Telephone Conference**

A telephone interview occurred on February 10, 2004 between the Examiner, Supervisory Patent Examiner Robert Warden, and the undersigned. The examiner has provided an Interview Summary, and Applicant is making additional comments herein to provide further information related to the Examiner's statements in that Interview Summary.

Applicant's first arguments during the February 10, 2004 telephone interview pointed out that neither Tokuhiro nor Devries alone or in combination teach a vaporization chamber "having an intake port and a diametrically opposed outlet port having no obstructions positioned therebetween" (see, for example, claim 5). During this interview, Applicant noted that the Examiner agrees that Tokuhiro fails to teach "a vaporization chamber with no obstructions positioned between the intake port and the outlet port" (see page 3 of the Examiner's December 16, 2003 office action). Next, as argued in Applicant's September 22, 2003 office action, Applicant noted that Devries also does not disclose a vaporization chamber having "diametrically opposed" intake and outlet ports "having no obstructions positioned therebetween". Instead, Devries discloses obstructions between the entry and exit to the reaction chamber by default because the entry and exit are not diametrically opposed. A gas flow entering the chamber can not pass directly through the chamber, but mixes within the chamber as the gas strikes the sidewall or floor of the chamber, thereby creating a baffle effect within the

chamber. Accordingly, the Applicant argued that the references, even if combined, failed to teach or suggest all the claim limitations. See MPEP § 2143 and Applicant's Office Action Response of September 22, 2003.

In response to the above arguments by the Applicant, the Examiner argued that the combination of Tokuhira and Devries could result in the claimed invention and that the invention would be obvious to one of ordinary skill in the art. The Examiner asserted that Applicant's arguments directed to the references individually, while the Examiner had considered the references collectively. See Examiner's Interview Summary for the February 10, 2004 interview.

In response to the Examiner's position that the Applicant was arguing the references individually, Applicant directed the Examiner's attention to pages 10-13 of the September 22, 2003 Office Action Response where Applicant submitted arguments that the Examiner had failed to establish a prima facie case of obviousness under MPEP § 2143. Under MPEP § 2143, the following criteria must be met to establish a prima facie case of obviousness: (i) there must be some suggestion or motivation in the art to combine the references, (ii) there must be a reasonable expectation of success, and (iii) the prior art references when combined must teach all the claim limitations. Unfortunately, the Examiner did not have a copy of that Office Action in his possession during the telephone interview, so Applicant read the substance of those arguments to the Examiner.

In response to Applicant's arguments that the Examiner failed to provide a motivation to combine the references, the Examiner directed the Applicant to page 4, lines 5-9 of the December 16, 2003 Office Action. In particular, the Examiner noted that the motivation for combining the references was the statement, "It would have been obvious to one having ordinary skill in the art to modify the method and apparatus of Tokuhira to design a vaporization chamber

with no obstructions positioned between the intake port and the outlet port in order to allow unimpeded settling of liquid droplets produced by nozzle 14 in the gas contained within the vessel (devries, col. 2, lines 52-55)." Applicant disagreed that this statement provided motivation to combine the references. At that time, Applicant was invited to submit arguments directed to the motivation statement for combining the references. Applicant agreed to do so, and those arguments are included in this Response.

### **III. The Rejection of Claims 1-18 Under 35 U.S.C. § 103(a) Should Be Withdrawn.**

In the December 16, 2003 Office Action, the Examiner rejected claims 1-18 under 35 U.S.C. § 103(a) as being unpatentable over Tokuhiko in view of Devries. Applicant respectfully traverses the Examiner's rejection of claims 1-18 and requests that the rejection be withdrawn. In particular, Applicant submits that the Examiner has failed to establish a prima facie case that claims 1, 5 and 14 are unpatentable under 35 U.S.C. § 103(a) as obvious to Tokuhiko in view of Devries. As noted previously, in order to establish a prima facie case of obviousness, the Examiner must provide some suggestion or motivation in the art to modify or combine the references. MPEP §2143. Such motivation does not exist when the prior art "teaches away" from the claimed invention. See MPEP 2145. In short, teaching away is the antithesis of the art suggesting that the person of ordinary skill go in the claimed direction. In re Fine, 873 F.2d 1071, 5 USPQ 2d 1596 (Fed. Cir. 1988).

In the present application, the Examiner has proposed that Devries provides motivation for combination with Tokuhiko because "it would have been obvious ... to modify the method and apparatus of Tokuhiko to design a vaporization chamber with no obstructions positioned between the intake port and the outlet port in order to "allow unimpeded settling of liquid

droplets produced by nozzle 14 in the gas contained within the vessel". However, a close analysis of Devries clearly shows that this prior art "teaches away" from Applicant's claimed invention. In particular, Devries is a typical prior art scrubber where a spray liquid is introduced in a chamber for the purpose of reacting with the gas in the chamber and providing "reaction products" (Devries, col. 2, lines 33-50). The desire for "unimpeded settling" in Devries is that the droplets need to be in contact with the gas in the chamber for as long as possible before falling to the floor (Devries, col. 2, lines 57-60). The longer the spray liquid is suspended in the chamber, the more time is provided for the spray liquid to react with the exhaust gas in the chamber and provide precipitates in the form of "reaction products" which fall to the floor of the chamber." There is never an attempt to allow the spray liquid to evaporate and become entrained in the output gas stream. In fact, efforts are taken to prevent the spray liquid from leaving the exhaust chamber. As noted in the abstract of Devries, "droplet size of the aqueous spray is controlled ... so as to prevent complete evaporation of the liquid droplets." Clearly, the object of Devries "allowing unimpeded settling of liquid droplets" is to prevent evaporation of droplets so they do not enter the resulting output stream of gas, but fall to the floor of the reaction chamber as contaminated reaction residue (Devries col. 2, lines 36-47).

In contrast to Devries, there is no motivation for allowing "unimpeded settling of liquid droplets" in Tokuhiro. Tokuhiro involves evaporating fragrant material into an air stream, separating the "evaporated fragrant air" from "mist" and delivering the evaporated fragrant air to a remote location (see Tokuhiro abstract). Removing the obstructions in the Tokuhiro chamber to allow "unimpeded settling of liquid droplets" would only result in less evaporation of liquid with more liquid product draining to the floor of the evaporation chamber. This would be contrary to the teaching of Tokuhiro (See attached Declaration of Randal Romack).

As set forth in the preceding paragraph, there is no suggestion or motivation in the prior art to combine the Devries and Tokuhiro references. Tokuhiro discloses a fragrant air delivery system where a liquid mist is evaporated in a chamber using various obstructions. On the other hand, Devries teaches away from evaporation of a liquid in a chamber and instead teaches unimpeded settling of liquid droplets in a chamber, thereby avoiding evaporation of the liquid. Accordingly, Devries teaching of preventing evaporation of a liquid mist in a chamber is improper to combine with Tokuhiro's teaching of evaporation of a mist in a chamber. Therefore, the examiner has failed to provide a suggestion or motivation to combine the Tokuhiro and Devries references, and the Examiner's rejection of the claims under 35 U.S.C. § 103 should be withdrawn.

In addition to the above, and as set forth in Applicant's September 22, 2003 Response, the proposed modification cannot change the principle of operation of a reference. MPEP 2143.01. In the present case, the Examiner proposes to combine the delivery system of Tokuhiro with the exhaust system of Devries. This would mean that the air entered into the chamber of Tokuhiro would be an exhaust gas as cited in Devries. Of course, Tokuhiro involves a fragrant air delivery system and the introduction of exhaust gas into the system would change the principle of operation of Tokuhiro. Additionally, providing a diametrically opposed inlet and outlet port with no obstructions therebetween would drastically reduce the gas circulation in both the Tokuhiro chamber and the Devries chamber. Air circulation within the chamber is important to the operation of both Tokuhiro and Devries. Thus, because the modification proposed by the Examiner would change the principle of operation of the prior art, there is no suggestion or motivation to modify or combine the references, and the Examiner has failed to establish a prima facie case of obviousness.

**IV. Conclusion**

For all of the foregoing reasons, it is respectfully submitted that Applicant has made a patentable contribution to the art which clearly distinguishes over and is patentable over the cited art. Favorable reconsideration and allowance of this application is therefore respectfully requested.

In the event Applicant has inadvertently overlooked the need for an extension or payment of an additional fee, Applicant conditionally petitions therefore, and authorizes any deficiency to be charged to deposit account number 09-0007.

Sincerely,



Russell E. Fowler, II  
Attorney for Applicant  
Attorney Registration No. 43,615  
ICE MILLER  
One American Square, Box 82001  
Indianapolis, Indiana 46282-0002  
Telephone: (317) 236-5804  
Facsimile: (317) 236-4252

REF/pgf

Enclosures: Declaration of Romack  
Return Postcard

cc: Randy Romack  
Jim May